

introduced an intra-uterine pessary in the shape of a silver drainage-tube and daily washed the womb through it with one per cent. solution of carbolic acid. A considerable improvement both of the local conditions and of the general health followed. The occasional removal of the drainage-pessary was followed within two or three weeks by the return of pelvic pains, purulent discharge, and general symptoms. By the end of two years, complete recovery was seemingly obtained: the uterine cavity decreased from 8 to 6 centimetres; the discharge ceased, and did not reappear after taking out the intra-uterine tube. The other patient is still under observation.—*London Med. Record*, July, 1883.

Puerperal Inversion of the Uterus.

Prof. BRAUN, of Vienna, reports in the *Wiener Med. Blätter*, Feb. 22, the following interesting case, with remarks: A primipara, æt. 20, well nourished, but somewhat flabby and moderately plethoric, was delivered naturally of a healthy male child, about five hours after the rupture of the membranes, at 3 A. M. on July 1. A few minutes later, without any traction having been made on the umbilical cord, a bag of membranes filled with blood protruded from the vulva and soon burst, discharging an enormous quantity of blood, mostly fluid, followed immediately by the inverted uterus with the placenta partly attached to its surface. The attendant, whose hand had been gently rubbing the abdomen, felt it at the same time suddenly empty. The uterus was replaced within the vulva, the placenta detaching itself in the process, and taxis was applied with the flexor surface of the fingers of the left hand. The right wall, corresponding to the pressure of the four fingers, was reduced first, and the other followed at once. Friction was then applied to the uterine wall by the right hand on the abdomen, against the left in the uterine cavity. Two quarts of a 2 per cent. carbolic solution were injected into the uterus, followed by four quarts of cold water, and subcutaneous injections of ergotin were employed. The patient had lost more than 63 ounces of blood, had almost lost consciousness, and was nearly pulseless. The lower extremities were, therefore, entirely enveloped in elastic bandages, the hip raised, and ether injections, tea with rum, etc. administered, until the pulse became moderately strong, and about 104 in the minute. The temperature was not taken on account of the necessity of keeping the patient warmly covered. Ice was placed on the abdomen, and no massage employed, and the uterus contracted so well that five stools passed within the twenty-four hours without causing any attempt at inversion. In spite of the free administration of stimulants and fluid nourishment, by mouth and rectum, the heart's action increased until on the evening of the second day the pulse was 152, with a temperature of 97.16° F., and a disproportion between pulse and temperature was still present two weeks afterwards. The importance of the auto-transfusion by means of the elastic bandages was shown by the subsequent history. When they were only partially loosened on the thigh, after four hours, symptoms of threatening collapse necessitated their re-application in a quarter of an hour; the attempt some hours later to bandage an arm and set free one leg produced dizziness, and the bandages could not be fully removed until after nineteen hours.

This case went on to complete involution of the uterus and usual health, and shows the operation of complete atony of at least a portion of the uterus in the production of inversion, which may then be induced even by the pressure of the abdominal muscles, so that it is not necessary to refer it always to external influences. The blood liberated by the partial detachment of the placenta collects between it and the uterine walls, flows into the membranes, and presses them down to the vulva, out of which they protrude, the blood behind meanwhile

dilating the lower segment of the uterus. The sudden bursting of the membranes and escape of the blood causes the inversion of the distended uterus, a partial inversion having probably already begun at the uncontracted seat of placental attachment, which may have been aided by traction on the part of the membranes.

Inversion is not so rare in primipara as has been imagined, and the following are the causes of its production in them:—

1. Feebleness of uterine contractions from the length of the labour, even when it is terminated by forceps, is the first cause.

2. Attachment of the placenta to the fundus, which is more common in primiparæ, predisposes to inversion.

3. The tense vaginal walls do not give under the downward force, and therefore do not so easily prevent inversion.

4. The narrow vulva serves to hinder the outflow of the blood, and so facilitates inversion through distension, and subsequent sudden escape of the blood.

In multiparæ, a predisposition to inversion may be occasioned by adherent placenta in previous labours.—*Lond. Med. Record*, July 15, 1883.

MEDICAL JURISPRUDENCE AND TOXICOLOGY.

Diffusion of Arsenic through the Body when thrown into the Mouth and Rectum after Death.

A recent murder trial in Michigan has brought out some new facts regarding the post-mortem diffusion of poisonous substances, which are substantially as follows: After the death of a lady, whose symptoms strongly pointed to arsenic poisoning, the husband, with a view of preserving the body for removal, injected arsenic suspended in water into the mouth and rectum. He claims to have put about a teaspoonful of arsenic into a teacupful of water, and to have injected one syringeful into the mouth and two into the rectum. The syringe which he claims to have used was an ordinary bulb syringe, with rectal tube attached.

One hundred and five days after her death the body was taken up, and the stomach and rectum placed in one jar, and a piece of the liver and one kidney in another; and the jars were sent to Prof. A. B. PRESCOTT for analysis of their contents. Dr. Prescott found in the stomach and rectum together about twenty grains of arsenious oxide, and from his analysis he calculated the amount in the whole liver to be from six to fifteen grains, according to the size of that organ. Later the body was again taken up, and the brain and a part of the muscles of the calf of the leg sent to Prof. Prescott for analysis. In these he failed to find any poison.

The question asked the experts, and the one which this paper considers, was: "Granting that the arsenic was injected into the mouth and rectum in the manner claimed, could it reach the liver and other organs outside the alimentary canal?" This was the main question, and on it the experts were divided.

In order to determine this question, Drs. VAUGHAN and DAWSON made the following experiments: A large musk-rat was killed, and about 50 grains (3.24 grammes) of arsenious oxide suspended in cold water were injected with an ordinary bulb syringe with rectal tube attached into the mouth and rectum. The rat was placed in a pine box and buried. After twenty-five days it was disinterred, and the various organs removed and subjected to analysis.